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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/605,497

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David Fries

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06/08/2006

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EXAMINER

PONOMARENKO, NICHOLAS

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,497

Applicant(s)

FRIES ET AL.

Examiner

Nicholas Ponomarenko

Art Unit

2834

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,4 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,4 and 7-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The replacement sheets (Fig. 3, 5 and 6) were received on May 27, 2005. This drawing is entered and considered.
2. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. Specifically:
 - a). Neither drawings nor specification explain the combination of the liquid and the gas in the constant volume chamber and how they interact, as is shown on Fig. 3 and 5.
 - b). Figure 3 shows the pneumatic circuits and the hydraulic circuits connected to the mechanical, fluidic and hydraulic loads. Neither drawings nor specification explain what these circuits and loads are or how they receive energy from the claimed "constant volume chamber".
 - c). It is not clear (Fig.3) how the pneumatic circuit 56 works with the liquid portion of the constant volume chamber?
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the elements structure, which "explosively actuating phase change material" must be shown or the feature(s) canceled from the claim(s). Newly submitted Figure 6 shows a concept of actuating the explosive material, but this feature (60) is not located anywhere in the general scheme

of operation or in container (32) and it is not provided with any specific means for its actuation. No new matter should be entered.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: see Figure 1, element 26.

5. New Figure 5 shows a structure for operation of the explosion container and the power generation device. The shown features are not in agreement with Figure 3 of which Figure 5 is an element.

6. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The amendment filed on May 17, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no

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amendment shall introduce new matter into the disclosure of the invention. The added material, which is not supported by the original disclosure, is as follows:

- a). Replacement of the gas behavior in the containers of the system in accordance with the Boyle's law to the operation in accordance with the combine gas law.
- b). Change of the claimed operation of the operative material from operation as was described in the original disclosure in paragraph [0036] as "programmable pressure delivery ... to maintain a desired pressure over time or actuate over time as part of a process activity' to a new description as "an explosion", which are totally different processes and/or modes of operation.
- c). New language, which is added to the descriptions of paragraph [0043] and paragraph [0044] describes operation of the pneumatic circuit (56) and hydraulic circuit (58), which were not previously disclosed and constitute a new matter according to 35 U.S.C. 132(a).

Applicant is required to cancel the new matter in the reply to this Office Action.

8. Paragraph [0007] of the specification refers to a prior art, which is not provided and is not available to the examiner. Applicants are requested to provide this prior art for examiner's consideration.

9. Paragraph [0048] appears as not completed sentence.

Claim Objections

10. Claim 3 is objected to because of the following informalities: Claim 3 uses word “chamber”, word “container” for the same limitation. Appropriate correction is required.

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Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 3, 4 and 7-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Explosive actuation of the phase change material was not in the original disclosure, as stated in the paragraph 7 above..

13. Claims 3, 4 and 7-13, as originally written, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The disclosure has number of technical errors, which make device operability questionable. Specifically:

Fig.3 and Fig.5 shows that “constant volume containers” have two fluids – water

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and gas, but the specification is silent about it, and the claims are not claiming operation of such fluid combination. It is important to note, that operation with the combination of two fluids, liquid and gas, would change completely the physics of the operation of the device.

Figure 3 shows the “pneumatic circuit” 56 and the “hydraulic circuit” 54, operation of which are not disclosed in the specification sufficiently to understand their operation or their structure. Additionally, the “pneumatic circuit” 56 is shown as connected to the pipe between containers 40 and 32 filled with liquid, which makes operation of the “pneumatic circuit” questionable.

It is not disclosed with any degree of certainty what are “mechanical loads 56a”, “fluidic loads 56b” or “pressure driven loads 56c”. One of ordinary skill would not know how to use or make these claimed features.

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 3, 4 and 7-13, as originally written, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear how “actuating said phase change material” is performed. There is insufficient antecedent basis for this limitation in the claim. The mere statement and a totally isolated and incomprehensible Figure 6 do not provide for a clear disclosure.

Claims 4 and 7 -13 are indefinite because they depend on the rejected claim and do not correct the noted problem.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. As broadly as they can be understood and interpreted, Claims 3, 4 and 7-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Chih-Kang (US 4,209,992) or Bussing (US 6,062,018).

Prior art teaches a method for harnessing the energy in compressed fluid by activating a phase change in a phase change material positioned in a constant volume container. Prior art also teaches turbine, pressure storage tank, pneumatic circuit, mechanical load and fluidic load, essentially as in applicant's claims.

Response to Arguments

18. Applicant's arguments filed on May 17, 2006 have been fully considered but they are not persuasive. Additionally, it appears that provided arguments were not addressing the prior Office action dated December 19, 2005, but action dated June 27, 2005.

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Ponomarenko whose telephone number is (571) 272- 2033, Fax: (571) 273-2033, or to his SPE Darren Schuberg – (571) 272-2044.

21. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 2800 Customer Service
Phone: (571) 272-2815

June 1, 2006



Nicholas Ponomarenko
Primary Examiner
Technology Center 2800